In the Claims:

Please amend the claims, as follows:

1. (Currently Amended) A polarized display, comprising:

an intensity modulating matrix display, said intensity modulating matrix display having a front surface; and

a polarizing matrix display [[panel]] in front of said intensity modulating matrix display, said polarizing matrix display [[panel]] having a front surface;

wherein the display is one of:

a linear polarization display, each pixel of said polarizing matrix display panel being controllable and a rotation of a generated polarized light being varied over a range including 90 degrees and below; and

an elliptical polarization display, each pixel of said polarizing matrix display panel being controllable and a phase between a fast and a slow axes of a polarized light coming from a corresponding pixel of said intensity modulating matrix display in a range including 180 degrees and below.

2. (Currently Amended) The display according claim 1, wherein said modulating matrix display comprises a backlight panel, a first polarizer, a first matrix display panel and a second polarizer, said polarizing matrix display [[panel]] comprising a second matrix display panel.

3. (Currently Amended) The display according to claim 1, wherein said polarizing matrix display [[panel]] comprises a front half-length retarder.

4. (Currently Amended) The display according to claim 3, wherein said polarizing matrix display [[panel]] comprises a quarter-length retarder sheet in front of said front half-length retarder, said display being an elliptical polarization display.

5. (Previously Presented) The display according to claim 1, wherein the display is looked at with passive 3D glasses, yielding a stereoscopic screen.

6. (Currently Amended) The display according to claim 1, wherein said intensity modulating matrix display comprises a first LCD panel and said polarizing matrix display [[panel]] comprises a second LCD panel, a first player wearing glasses with both eyes at a first polarized orientation and a second player wearing glasses at a second polarized orientation, yielding a two players-two displays-single screen-full screens display screen.

7. (Currently Amended) The display according to claim 1, wherein said intensity modulating matrix display comprises at least one of a first micro-lens arrays layer and gradient index lenses (GRIN), said polarizing matrix display [[panel]] comprising at least one of a first micro-lens arrays layer and gradient index lenses (GRIN).

8. (Currently Amended) The display according to claim 1, wherein said polarizing matrix display [[panel]] comprises one of a front diffuser and a front microballs diffuser.

9. (Currently Amended) The display according to claim 8, wherein said polarizing matrix display [[panel]] comprises a microprism between the front surface thereof and said front microballs diffuser.

10. (Previously Presented) The display according to claim 1, wherein said intensity modulating matrix display comprises a grating optical element in the front surface thereof.

11. (Previously Presented) The display according claim 1, further comprising an image replicator layer provided between said intensity modulating matrix display and said polarizing matrix display panel.

12. (Previously Presented) The display according to claim 11, wherein said image replicator layer comprises at least one of a mini-Lens Arrays layer where arrays are_selected to form a non-inverted 1:1 image projection, and Index (GRIN) lenses.

13. (Original) The display according to claim 11, wherein said image replicator layer comprises at least one holographic optical elements device.

14. (Currently Amended) The display according to claim 1, wherein said intensity modulating matrix display and said polarizing matrix display [[panel]] are integrated into one matrix display panel.

15. (Previously Presented) The display according to claim 14, wherein said integrated matrix display panel comprises two active glass substrates and a thin sheet of liquid crystals between said two substrates, said thin sheet comprising an IPO conductive layer and a color filter and said two active substrates and said color filter being aligned.

16. (Previously Presented) The display according to claim 15, wherein said two active substrates are about 7 mm thick, said thin sheet is less than about 2 mm.

17. (Currently Amended) The display according to claim 1, wherein both said intensity modulating matrix display and said polarizing matrix display [[panel]] comprise_LCD panels.

18. (Previously Presented) The display according to claim 1, wherein each pixel is subdivided into sub-pixels controlling a red, a green and a blue intensity, said intensity modulating matrix display and said polarizing matrix display panel respectively converting each corresponding sub-pixel into modular and angular signals given in a Cartesian system of angles as follows:

$$Modulo = \sqrt{(left^2 + right^2)} \quad (1)$$

$$Angular = Arc\tan\left(\frac{left}{right}\right) \quad (2)$$

where left is a value of a sub-pixel of a first image with the first linear polarization angle corresponding to a same sub-pixel on a second image with the second linear polarization angle, and right is a value of a sub-pixel of the second image corresponding to a same sub-pixel on the first image.

19. (Previously Presented) The display according to claim 18, wherein_the modular and angular signals are given in an oblique system of angle $\omega = \alpha + \beta$ by transformed modular and angular signals as follows:

$$Modulo' = \sqrt{(L^2 \cos^2\theta + 2LR\cos(\omega+\theta) + R^2\cos^2(\omega+\theta))} \quad (9)$$

$$Angulo' = \arctan\left(\frac{L\cos\theta + R\cos(\omega+\theta)}{L\sin\theta + R\sin(\omega+\theta)}\right) \quad (10)$$

where $2\theta = (90° - (\alpha + \beta))$, L is value of a sub-pixel of a first image with a first linear polarization angle β corresponding to a same sub-pixel on a second image with a second linear polarization angle α, and R is a value of a sub-pixel of the second image corresponding to a same sub-pixel on the first image.

20. (Original) The display according to claim 19, further comprising a first and a second linear polarized filters located side by side in a plane generally parallel to the front surface of the polarizing matrix display panel, in front thereof; said first linear polarized filter being at an angle A at 90 degrees from the first linear polarization angle β and said second linear polarized filter being at an angle B at 90 degrees from the second linear polarization α, wherein the left and right values are recovered from said transformed modular and angular signals with said first and second filters at A and B angles as follows:

$$\sqrt{(L^2 + 4LR\cos\theta\sin\theta + R^2)} \bullet Cos\left(\arctan\left(\frac{L\sin\theta + R\cos\theta}{L\cos\theta + R\sin\theta}\right) + \theta\right) = left \bullet Cos\,(2\theta) \quad (11)$$

$$\sqrt{(L^2 + 4LR\cos\theta\sin\theta + R^2)} \bullet Sin\left(\arctan\left(\frac{L\sin\theta + R\cos\theta}{L\cos\theta + R\sin\theta}\right) - \theta\right) = right \bullet Cos\,(2\theta) \quad (12)$$

where $2\theta = (90° - (\alpha + \beta)) = A - \alpha = B - \beta$.

21. (Original) The display according to claim 20, wherein said filters are mounted on viewer spectacles.

22. (Previously Presented) The display according to claim 21, wherein said viewer spectacles comprise a parasite elliptical light eliminator.

23. (Previously Presented) The display according to claim 18, further comprising a memory means for storing transformed signals.

24. (Currently Amended) The display according to claim, ~~wherein,~~ wherein each frame is toggled between two Modulo-Angular discrete signals to yield obtain an average thereof, thereby reducing cross talk between the first and second images.

25. (Original) The display according to claim 2, further connected to a controller means, said controller means controlling an overdrive of at least one of said first matrix display panel and said second matrix display panel.

26. (Previously Presented) The display according to claim 18, further connected to a controller means, said controller means controlling delay of the modular and angular signals, wherein i) when a sub-pixel goes from dark to bright while a second corresponding pixel is dark, the Modulo signal is delayed relative to the angular signal ; and ii) when the first sub-pixel goes from bright to dark while the second corresponding pixel is dark, the Angular signal is delayed relative to the Modulo signal.

27. (Original) The display according to claim 1, wherein said intensity modulating matrix display comprises a first LCD panel and said polarizing matrix display panel comprises a second LCD panel, said polarizing matrix display panel comprising a filter sheet on the front surface thereof, yielding an enhanced 2D screen.

28. (Currently Amended) The display according to claim 1, wherein said intensity modulating matrix display comprises a first LCD panel and said polarizing matrix display [[panel]] comprises a second LCD panel, said display being looked at with a non 3D type of polarized glasses, yielding an enhanced 2D screen.

29. (Currently Amended) The display according to claim 1, wherein said intensity modulating matrix display comprises a first LCD panel and said polarizing matrix display [[panel]] comprises a second LCD panel, a private image being shown on the second LCD while a complete white image is displayed on the first LCD, whereby only a user wearing polarized glasses is able to the private image, other people seeing only a white screen.

30. (Currently Amended) The display according to claim 1, wherein said intensity modulating matrix display comprises a first LCD panel and said polarizing matrix display [[panel]] comprises a second LCD panel, a private image being shown on the second LCD while

a fake image is displayed on the first LCD, whereby only a user wearing polarized glasses is able to see the private image, other people seeing the fake image.

31. (Currently Amended) A method for generating stereoscopic images, comprising the steps of:

providing an intensity modulating matrix display;

providing a polarizing matrix display [[panel]] following the intensity modulating matrix display; and

one of:

a) controlling each pixel of the polarizing matrix display panel and a rotation of a generated polarized light over a range including 90 degrees and below; and

b) controlling each pixel of the polarizing matrix display panel and a phase between a fast and a slow axes of a polarized light coming from a corresponding pixel of said intensity modulating matrix display over a range including 180 degrees and below.